DOCUMENT RESUME

ED 234 253 CE 037 029

TITLE	Job Safety. Cooperative Occupational Education, Unit 14. Instructor Material and Student Material.
INSTITUTION	Missouri Univ., Columbia. Instructional Materials Lab.
SPONS AGENCY	Missouri State Dept. of Elementary and Secondary Education, Jefferson City. Div. of Vocational Education.
PUB DATE	83
NOTE	31p.; For related documents, see CE 037 015-035.
AVAILABLE FROM	Instructional Materials Laboratory, University of Missouri - Columbia, 10 Industrial Education Building, Columbia, MO 65211 (Instructor material for entire set: SN-31-I, $25.00; Complete set of student material: SN-31-S, $15.00. Packets not available separately).
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051) -- Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Accident Prevention; Accidents; Behavioral Objectives; Career Development; *Cooperative Education; Employee Attitudes; Employer Attitudes; Employer Employee Relationship; Employment Potential; Injuries; *Job Skills; Job Training; Learning Activities; Learning Modules; *Occupational Safety and Health; Safety; *Safety Equipment; Secondary Education; Teaching Methods; Test Items; Transparencies; Units of Study; Vocational Education; Work Attitudes

ABSTRACT

This unit, one in a series of packets of teacher and student materials for cooperative occupational education (COE) designed for special needs students, is intended to provide students with information relative to job safety. Emphasis is placed on monetary and personal costs of accidents, causes of accidents on the job, and how accidents can be prevented. The instructor material includes the following items: unit objectives, specific objectives, suggested activities, an outline of information given in the student instructional materials, transparency masters, a key to the unit review, and references. The student material contains objectives, an introduction, information sheets, assignment sheets (with activities such as matching, quizzes, and puzzles), and a unit review. Student materials and transparency masters are illustrated with line drawings. (KC)

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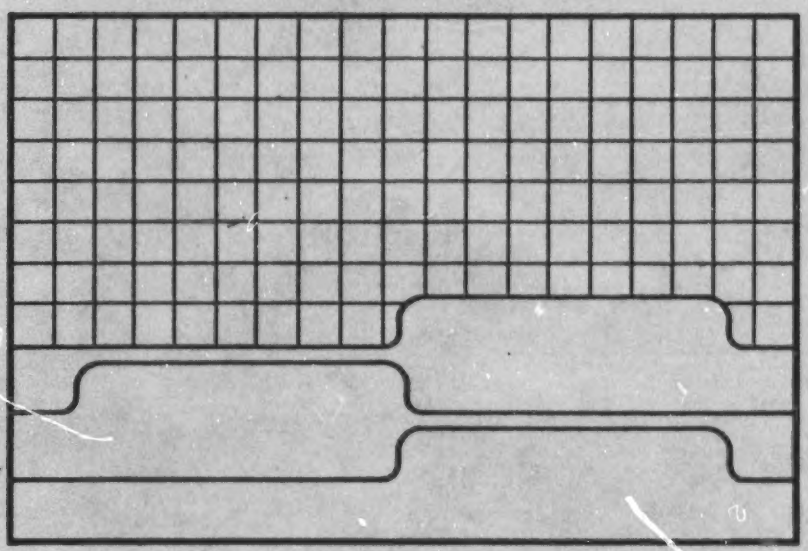
Cooperative Occupational Education

Instructor Material

and Student Material

Unit 14
Job Safety



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INSTRUCTOR

COURSE TITLE - COOPERATIVE OCCUPATIONAL EDUCATION

SECTION D - ON THE JOB

UNIT - 14: JOB SAFETY

UNIT OBJECTIVES

This unit will provide students with information relative to job safety. Emphasis is on monetary and personal costs of accidents, causes of accidents on the job and how accidents can be prevented.

SPECIFIC OBJECTIVES

1. Identify two costs of accidents.
2. Select seven reasons accidents occur on the job.
3. List five ways to prevent accidents on the job.

SUGGESTED ACTIVITIES

I. Instructor

A. Prepare transparencies (TM 14-1, TM 14-2, TM 14-3).

B. Discuss objectives.

C. Discuss Information Topics (IT 14-1, IT 14-2, IT 14-3).

D. Review Assignment Sheets (AS 14-1, AS 14-2, AS 14-3).

E. Administer and evaluate unit review.

F. Optional Activities

1. Prepare a bulletin board on job safety. Pictures and articles about accidents on the job and/or accident prevention could be cut from magazines and newspapers and arranged on the bulletin board under a theme chosen by you or the class.

2. Invite a staff member from the local hospital's emergency room to talk to the class about emergencies stemming from accidents that have occurred on the job.

3. Invite the Safety Director from a local plant in to talk to the students about safety on the job.

4. Arrange for a tour of a local industry. The tour should stress what the industry does to emphasize job safety.

   a. If in a rural community, the local Extension Agent could be contacted to conduct a tour of a farm where safety practices could be emphasized.

5. If possible invite a supplier of safety equipment to talk about, and demonstrate, how, when, where and why safety equipment is used.

II. Student

A. Read and discuss unit objectives.

B. Read and discuss Information Topics.

C. Complete Assignment Sheets.

D. Review and discuss Assignment Sheets.

E. Complete unit review.

INSTRUCTIONAL MATERIALS

I. Included in this unit

A. Objective sheet

B. Information Topic sheets

1. IT 14-1: What You Should Know About: The Cost of Accidents

2. IT 14-2: What You Should Know About: Reasons Accidents Occur

3. IT 14-3: What You Should Know About: Ways to Prevent Accidents on the Job

C. Transparency masters

1. TM 14-1: Seven Main Causes of Accidents

2. TM 14-2: Work Environment and Accidents

3. TM 14-3: Five Ways to Avoid Accidents

II. References

A. Gooch, B. G., L. Carrier, and J. Huck. Work: Pathway To Independence. Chicago: American Technical Society, 1979.

B. Grimes, L. A. Jr. Students Personal Adjustment to Work. Austin, TX: University of Texas Instructional Materials Center, 1973.

C. Kimbrell, G. and B. S. Vineyard. Succeeding in the World of Work. Bloomington, IL: McKnight Publshing Co., 1981.

D. Kimbrell, G. and B. S. Vineyard. Entering the World of Work. Bloomington, IL: McKnight Publshing Co., 1978.

E. OSHA: Your Workplace Rights in Action. Kansas City, MO: U.S. Department of Labor, Occupational Safety and Health Administration, 1978.

F. Orientation to Employment. Columbia, MO: Instructional Materials Laboratory, University of Missouri-Columbia, 1976.

G. General Shop Safety. Library Filmstrip Center, 1980. (filmstrip)

H. It's as Easy as ABC. California State Compensation Fund. (film)

I. Red Cross First Aid. American Red Cross, 1978. (film)

WHAT YOU SHOULD KNOW ABOUT JOB SAFETY

UNIT 14

I. The Cost of Accidents (IT 14-1)

A. The monetary cost of accidents can be estimated based on reports made by business and industry.

1. Statistics on accidents are recorded and reported by the National Safety Council.

2. Monetary costs include:

a. Money value of time lost

b. Loss in productivity

c. Compensation to individuals

d. Insurance costs

e. Property lost and/or damaged

f. Loss in wages

g. Medical costs

B. Personal loss and hardship caused by work accidents is incalculable.

1. Physical damage that is permanent

2. Psychological damage

3. Careers, plans, and goals altered or permanently halted

4. Hardships imposed on the victim's family - financial and emotional

II. Reasons Accidents Occur (IT 14-2) (TM 14-1)

A. Individuals cause accidents by their behavior.

1. A lack of knowledge of how to operate and/or handle the tools, equipment and materials they work with

2. Carelessness

3. A lack of skill in performing job tasks or operations

4. Poor safety attitudes and habits

5. Physical limitations

6. Fatigue

B. Environmental hazards can cause accidents (TM 14-2).

1. Lack of proper safety equipment

2. Inadequate safety procedures

3. Poor housekeeping

4. Unsafe machinery

5. Unsafe production methods

C. Business and industry spends millions of dollars each year to make the work environment safer.

1. Safer machinery is designed.

2. Safety education programs are being used to make personnel more safety conscious.

3. Many businesses have a separate department responsible for safety.

4. Safety engineers study methods to make the work environment safer.

III. Ways to Avoid Accidents On the Job (IT 14-3) (TM 14-3)

A. Know and follow safety rules and regulations.

B. Wear safety clothing and equipment when and where required.

C. Use tools and equipment safely.

D. Make sure that guards and shields on machinery are in place before operating them.

E. Know what to do in case of an accident or an emergency.

F. National Safety Council's three "E's" for accident prevention.

1. Engineer the job for safety

2. Educate for safety

3. Enforce safety rules

JOB SAFETY

UNIT 14

KEY TO UNIT REVIEW

A.
1. D
2. P
3. D
4. D
5. P
6. D
7. P
8. P

B.
1. a
2. c or g
3. e
4. c or g
5. f or b
6. b
7. d

C. 1, 4, 5, 6, 7

Seven Main Causes of Accidents

Carelessness

Lack of Knowledge

Fatigue

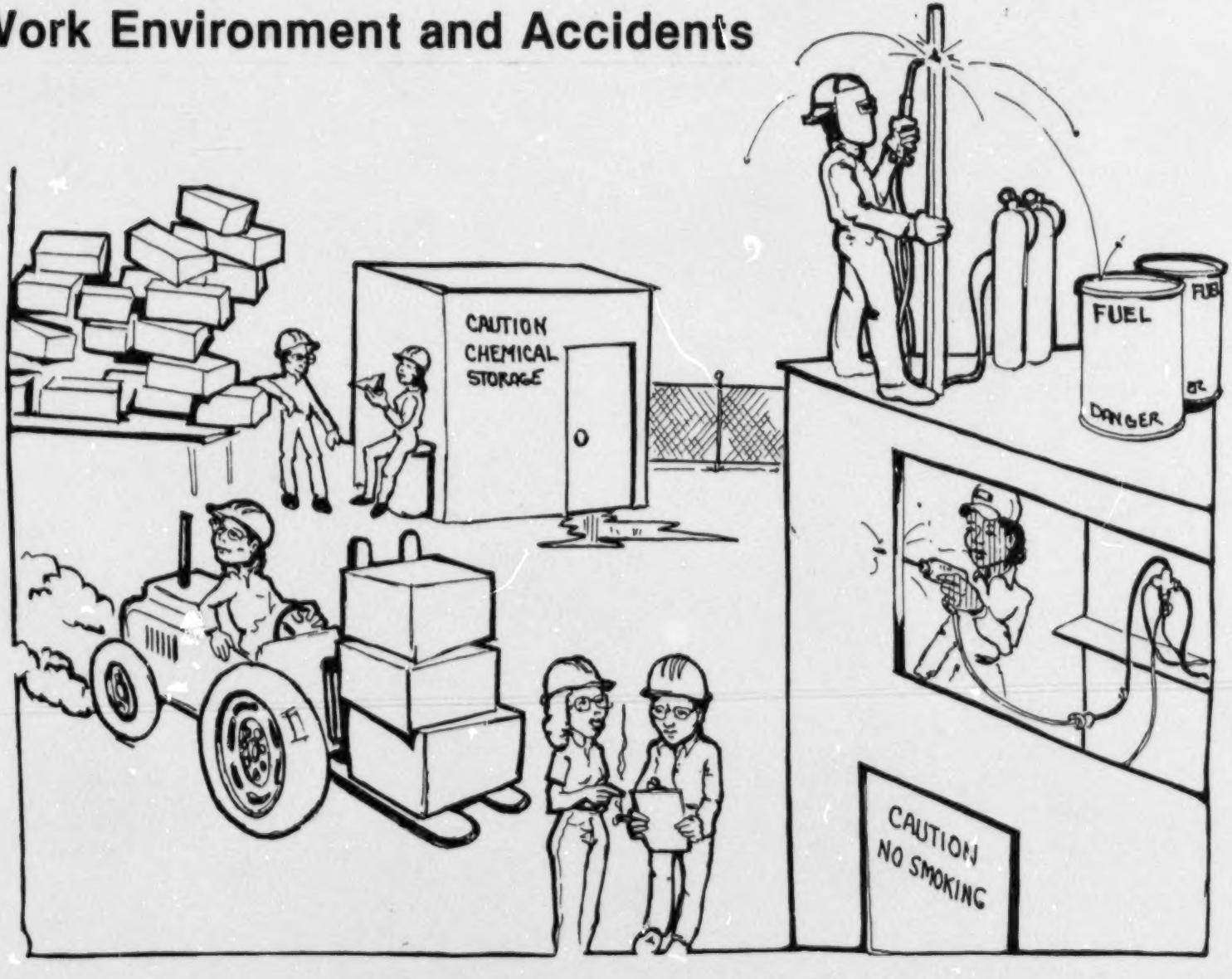
Attitudes

Lack of Skill

Physical Limitations

Environmental Hazards

Work Environment and Accidents



What Accidents Might Happen Here?

Five Ways to Avoid Accidents

Know Safety Rules and Follow Them

Develop Skills and Knowledge of Job

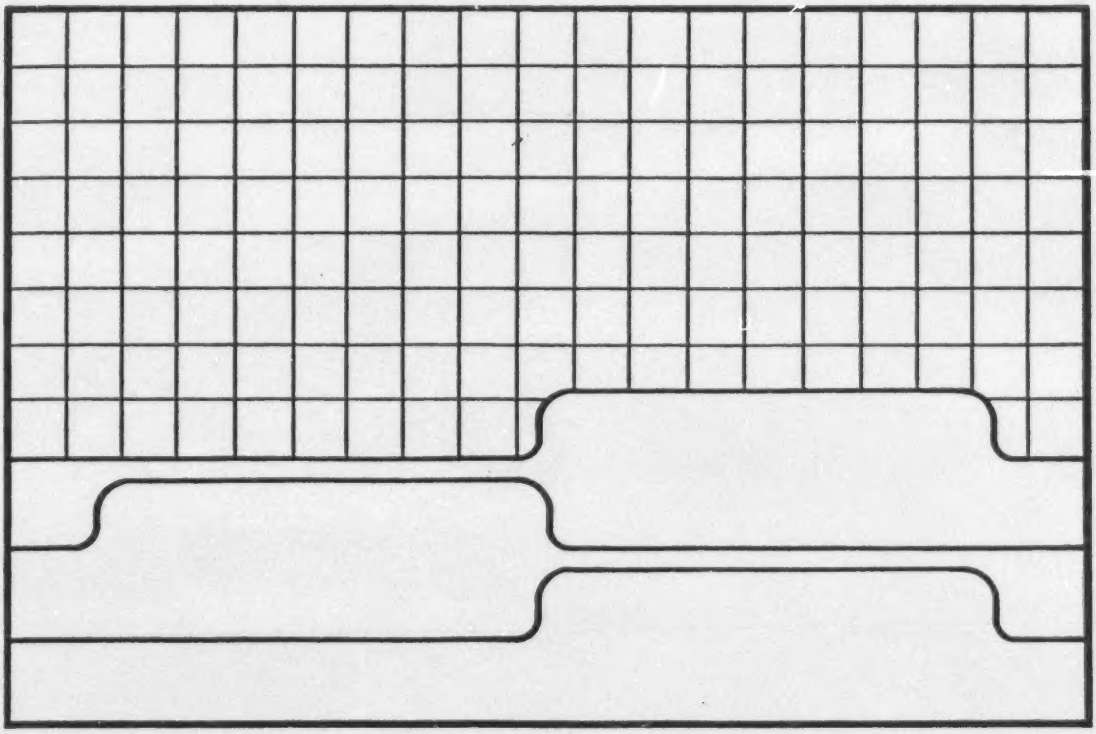
Use Tools and Equipment Safely

Know What to Do in Case of an Emergency

Wear Safety Equipment

Cooperative Occupational Education
student material

Unit 14
Job Safety



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Job Safety

After completing this unit, you will be able to:

- Identify two costs of accidents.
- Select seven reasons accidents happen on the job.
- List five ways to prevent accidents on the job.

Introduction

No job is good if the safety rules are not followed. This unit looks at the importance of safety on the job. You will learn about the costs of accidents, what causes accidents, and how to prevent accidents on the job.

What You Should Know About
The Cost of Accidents

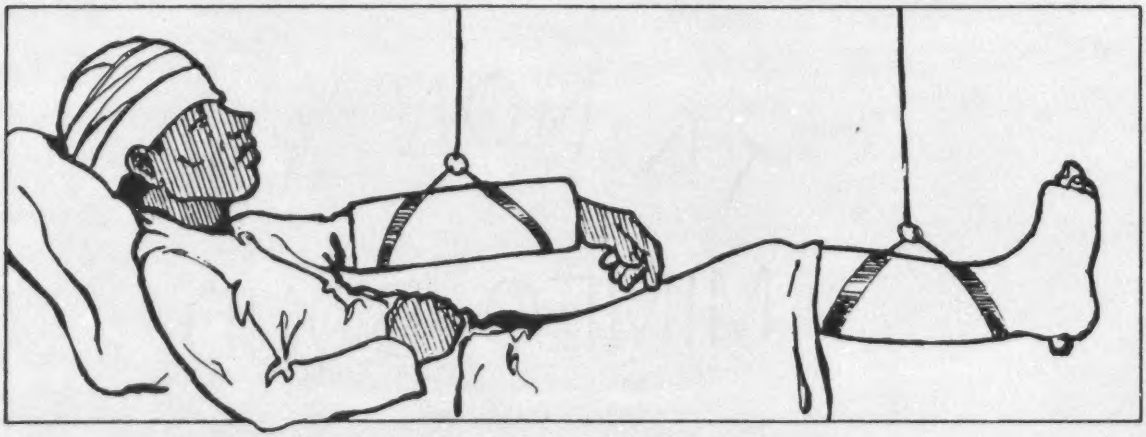
The true cost of job-related accidents is very high. It is possible to estimate what the cost is in money, but money is only part of it. Other costs are those that people suffer because of accidents.

Let's take a look at the cost in terms of money.

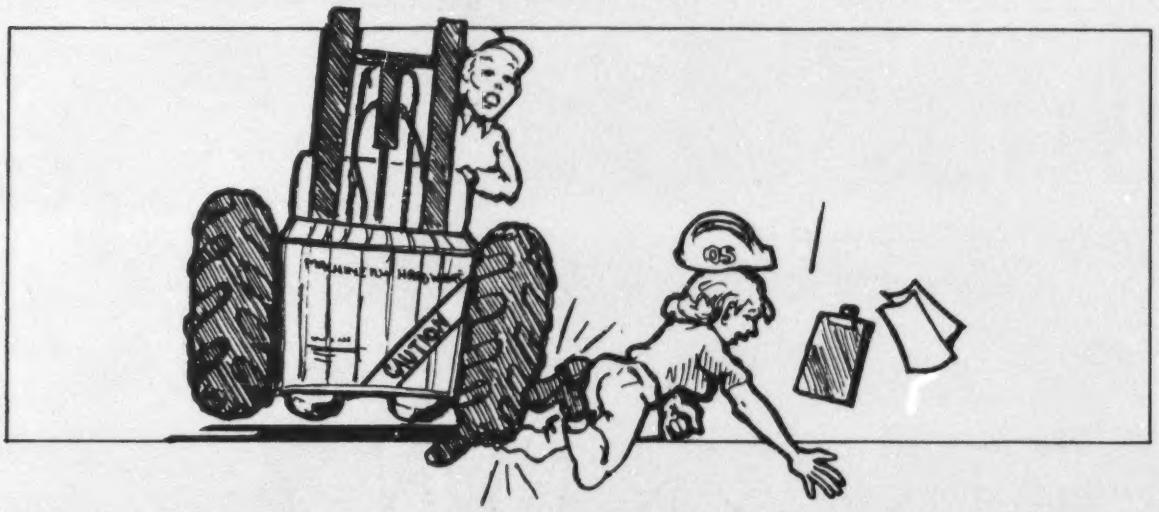
Information from the National Safety Council shows that accidents in the United States cost billions of dollars each year.

The cost of accidents includes a number of things.

- The loss of wages of the victim. This can be temporary or, in the case of death, permanent.
- Value of time lost by workers as a result of accidents
- Medical expenses
- Insurance costs
- Property damage



The second and possibly most serious cost of an accident is the personal cost. This is the effect accidents have on you and your family. The personal cost is also the effect on your goals, future plans and careers.



An accident can change your entire life. You may be paralyzed, blinded or disfigured in some way. This might force you to start a new career because of your injury.

An accident also has an effect on your family and lifestyle because of the changes it might bring about.

I'LL HAVE TO CHANGE MY JOB FROM FIELD TROUBLESHOOTING TO COMPUTER WORK.
THAT MEANS GOING BACK TO SCHOOL AND LESS MONEY FOR AWHILE.

You can see that accidents are not to be taken lightly. You must be aware of what causes accidents and how to avoid them.

What You Have Learned About
The Cost of Accidents

What are the effects of the following accidents? Tell who might be affected and how.

1. Peter had completed his apprenticeship program as a mechanic. He had a good job and was looking forward to the day he could open his own garage. One day Peter was underneath an automobile working on a transmission. The jack he was using to lower the transmission failed. The transmission dropped on Peter's hands and crushed them so badly that one hand had to be amputated.

   Who was affected? _____

   How? _____

   _____

   What were the effects? _____

   _____

   _____

3. Mr. Smith had a good job as a brick mason. His high wages let him and his family live very well. Mr. Smith planned to buy a home in Florida for vacations and as a retirement home for him and his wife. Last week the scaffolding that Mr. Smith was working on collapsed. He broke his neck in the fall. Mr. Smith will be paralyzed for life and will never be able to work again.

   Who was affected? _____

   How? _____

   _____

   What were the effects? _____

   _____

   _____

2. Mary was a high school senior. She wanted to go to college to become a teacher. Mary was also a single-parent mother. In order to help pay her way through school Mary worked part-time as a cook. One morning Mary went in to work the breakfast shift and unknown to Mary, a gas valve had been leaking. When Mary lit the stove, the gas exploded. Mary was blinded and seriously burned.

Who was affected? _____

How? _____

_____

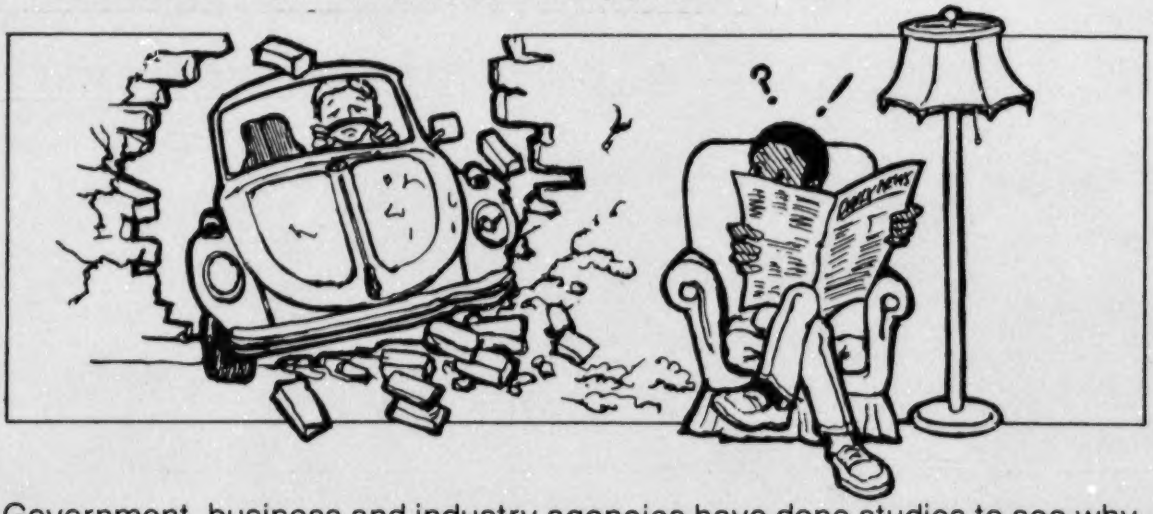
What were the effects? _____

_____

_____

What You Should Know About
Reasons Accidents Occur

Accidents can happen any time and any place.



Government, business and industry agencies have done studies to see why accidents occur on jobs. These studies have found some common causes of accidents.

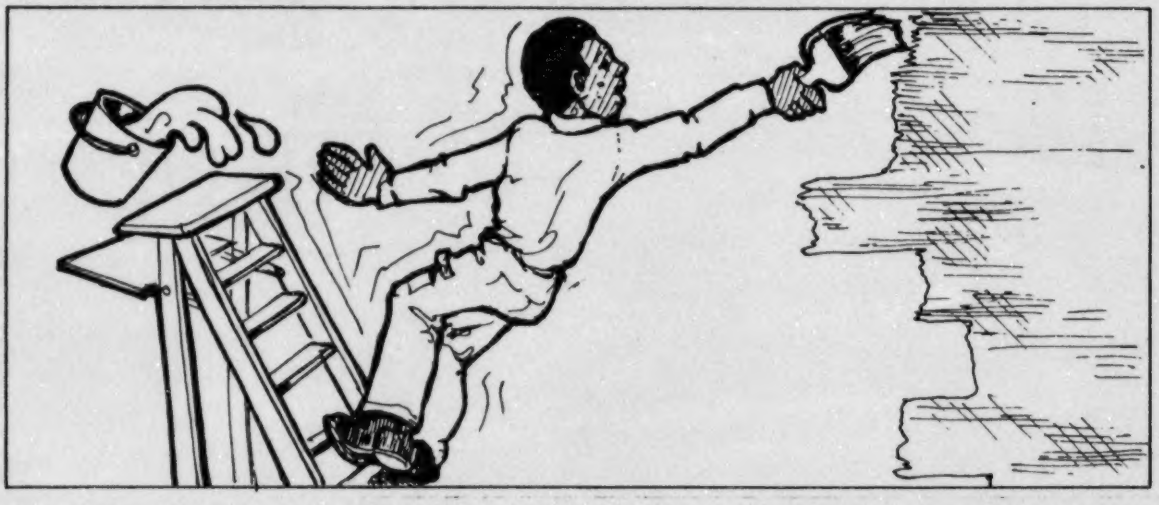
LACK OF KNOWLEDGE

Accidents can occur because you lack knowledge of the tools, equipment or materials you use on your job.

This can happen if you were not trained well. Accidents also occur if you don't pay attention during the training.

CARELESSNESS

Carelessness is a major cause of accidents on the job. Even well-trained employees can have accidents if they are rushed and don't take time to do things safely. Remember to think before you act. One careless action can cause an accident.



Being tired or not paying attention to what you are doing can result in carelessness and accidents.

LACK OF SKILL

Lack of skill is also a common cause of accidents at work. Workers are sometimes injured on the job when they try to do something that requires more skill than they presently have.

You want to develop your skills on the job so that as you work you and those around you will not run a risk of being injured.

WORK HABITS AND ATTITUDES

Your work habits and attitudes have an effect on the number of accidents that can occur on the job. Have a positive attitude toward safety rules. Safety rules are there to reduce the chance of you or someone around you having an accident.

Start following job safety rules right away. In a very short time you will develop good safety habits and you will practice them automatically. In fact, you'll find that you are uncomfortable if you forget to follow a safety rule.

ENVIRONMENTAL HAZARDS

Environmental hazards are the things around you that might be dangerous.

Much is being done to make your work environment safer. Safety equipment is worn by workers and built into machinery to lessen the danger of accidents.

Safety engineers study accidents to determine their causes. Inspectors make sure that conditions and procedures are safe. Laws establish safety standards on the job.

PHYSICAL LIMITATIONS

Accidents can be caused by physical limitations. Many people are injured on the job when they try to do something that they physically cannot do. This might be lifting too much or trying to do too much at one time.

FATIGUE

Being tired causes accidents by slowing down your reactions and making you less alert.

You have heard about drivers falling asleep at the wheel, and having an accident. This also happens on the job. If you are well-rested and alert you will be able to perform your job in a safe and efficient manner.

What You Have Learned About
Reasons Accidents Occur

Reasons for Accidents:

Lack of Knowledge	Carelessness
Lack of Skill	Work Habits and Attitudes
Environmental Hazards	Physical Limitations
	Fatigue

Here are three accident situations. Read each one and choose the reason the accident happened. Be prepared to tell why you chose it. List what could have been done to prevent each accident.

A. Mary J. works at a local hospital. She is changing a bed sheet while the patient is still in bed. She forgot to bring another blanket and decides to go get one. Normally Mary would put the side rails up when leaving, but she is in a hurry to finish and leaves them down. When she is gone the patient falls out of bed and breaks an arm.

Reason for accident: _____

_____

What could have been done: _____

_____

_____

B. Carlos has been working as an apprentice electrician for one year. For the past week he has been roughing in wiring in a new house. He sees that the wiring plans call for a 220 volt receptacle in the kitchen. He knows that working with 220 volts can be dangerous. Even though he has never done a job like this before, he decides to go ahead and do it. In attempting to wire the receptable he makes a mistake and is badly shocked and burned.

Reason for accident: _____

What could have been done: _____

_____

_____

C. Lucy has been working as a carpenter's helper for six months. She has used a radial arm saw on the job. On Thursday, Lucy has to cut some two by fours. Because she stayed out late Wednesday night and got only five hours of sleep, Lucy feeds the lumber in at the wrong angle and the blade kicks the lumber back and her thumb is broken.

Reason for accident: _____

What could have been done: _____

_____

_____

What You Should Know About
Ways to Avoid Accidents on the Job

Accidents can and do happen on the job but there are ways you can prevent or reduce them.

KNOW THE SAFETY RULES AND FOLLOW THEM.

Wherever you work, you will find there are safety rules. Employers conduct safety classes, put up posters and hand out safety booklets. It is up to you to remember and follow safety rules.

WEAR SAFETY EQUIPMENT.

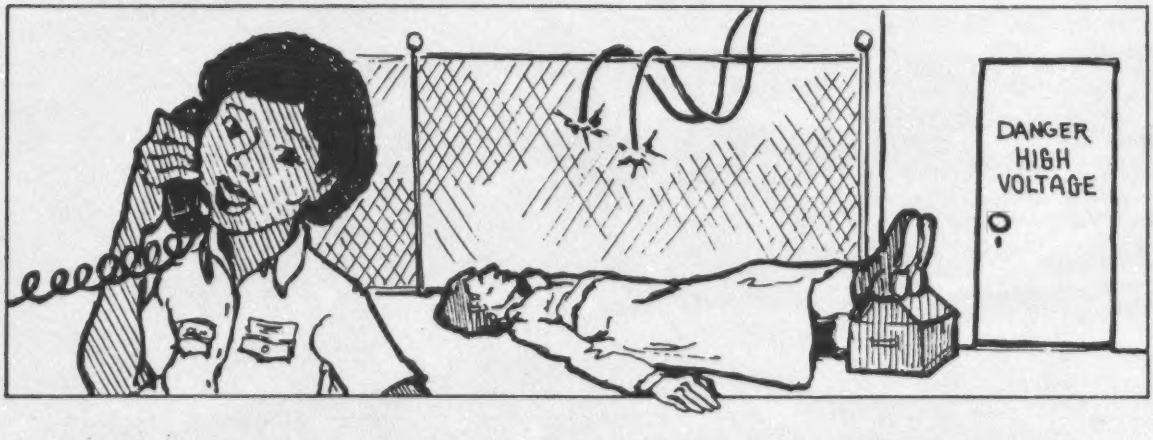
Many jobs require you to wear safety clothing or equipment. There is a reason for this and it is important that you wear safety equipment.

If you are required to wear special safety clothing or equipment, your employer usually will supply you with it.

USE TOOLS AND EQUIPMENT SAFELY.
Don't use electrical tools or machinery in wet or damp places. Obey safety rules concerning equipment and tools you use.

Make sure that safety guards or shields are in place and working before you operate machines.

KNOW WHAT TO DO IF AN ACCIDENT OCCURS.
Your safety and that of your coworkers can depend on how you react when an accident happens.



Ask your employer what you are to do, where to go or whom to contact in case of an accident on the job. Your life could depend on knowing what to do.

DEVELOP SKILLS AND KNOWLEDGE OF JOB.

Watch a skilled person do the job. Pay close attention to how it is done and the safety precautions that are taken.

Do the job yourself under the supervision of the skilled worker. Work slowly and carefully. If you are not sure of something, stop and ask for advice.

Practice doing the job until both you and the skilled worker are sure that you can do it correctly and safely.

What You Have Learned About
Ways to Avoid Accidents on the Job

Here are some things workers might do on the job. Put a star in front of the ones that help prevent accidents.

1. Tell a coworker "I don't have time to read those safety brochures the boss gave us yesterday."
2. Put on safety glasses before entering the shop.
3. Check to be sure all the safety guards are in place before using a machine.
4. Use an electric drill while standing on a wet floor.
5. Know what to do if an accident happens on the job.
6. Use equipment without having any training on it.
7. Watch a skilled person do a job and notice the safety precautions that are taken.
8. Have a skilled worker watch you practice using a new piece of equipment.

Name: _____

Unit 14 Review

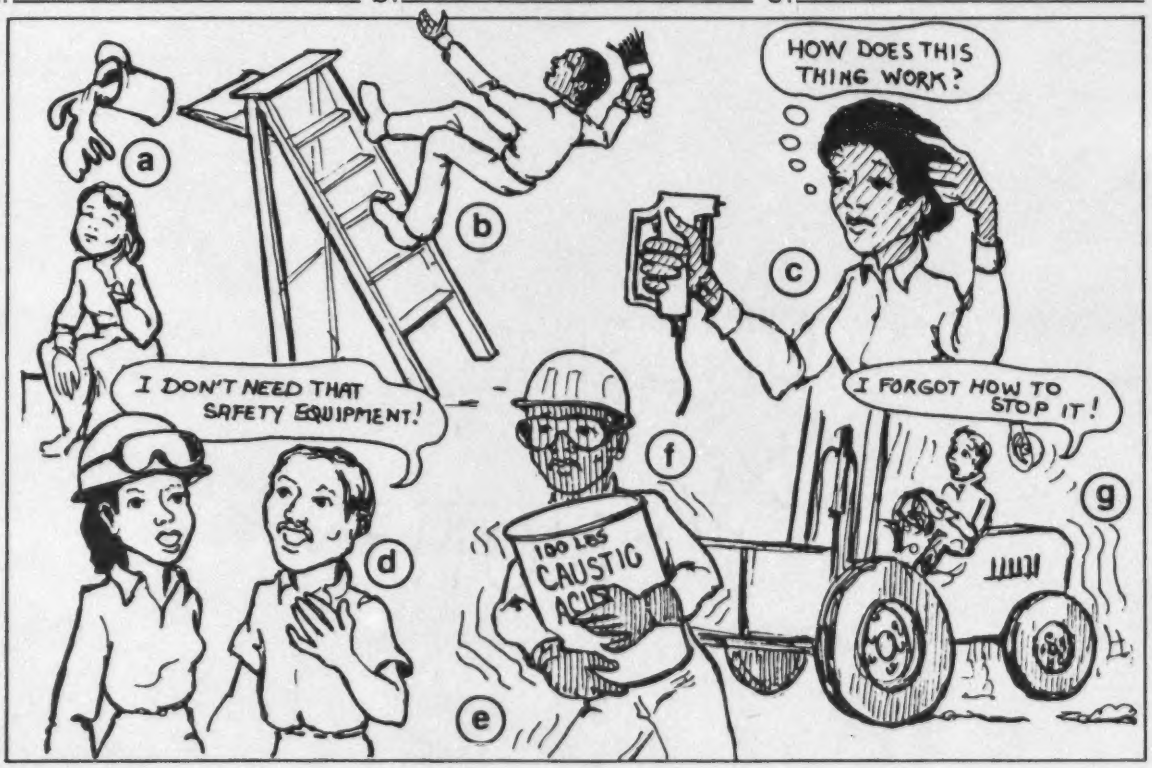
A. Listed below are examples of costs of accidents. If the example is a cost in dollars write D. If it is a personal cost write P.

____ 1. Property Damage
____ 2. Career ended
____ 3. Hospital charges
____ 4. Loss of work time
____ 5. Goals permanently changed
____ 6. Insurance costs
____ 7. Inability to do present job
____ 8. Change in life style

B. Here are seven pictures that show reasons why accidents occur on the job. Match the reason with the picture.

1. Fatigue
2. Lack of Knowledge
3. Environmental Hazard
4. Lack of Skill
5. Physical Limitations
6. Carelessness
7. Poor Attitudes

a._____ b._____ c._____



d._____ e._____ g._____

f._____

C. Which of the following are ways to avoid accidents on the job? Put an X in front of them.

_____ 1. Know and follow safety rules.
_____ 2. Wear heavy clothing.
_____ 3. Use any tools and equipment that are handy.
_____ 4. Know what to do in case of an accident.
_____ 5. Develop skills and knowledge of job.
_____ 6. Use tools and equipment properly.
_____ 7. Use and/or wear safety equipment.

My evaluation shows that I understand this unit and that I am ready to continue.

_____

Student Signature

The student has completed this unit to my satisfaction and is now ready to continue.

_____

Instructor Signature